TO THE EDITOR, *British Journal of Venereal Diseases*

Treatment of gonococcal infections in men with single dose thiamphenicol

Sir,

Thiamphenicol is widely used in Europe for the treatment of gonorrhoea, but at present it is not licensed for use in the United Kingdom or United States. The results of the treatment of a group of 70 men with uncomplicated gonococcal infections who attended this department between January and March 1983 may therefore be of interest.

Specimens for microscopy and culture for *N gonorrhoeae* were taken from the sites exposed to infection, and an endourethral swab was used to collect material for culture for *C trachomatis*. Before treatment, urine alysis, a full blood count, and syphilis serology were performed on every patient. The diagnosis of gonococcal infection was always confirmed by culture, but men showing intracellular Gram negative diplococci on microscopy of urethral or rectal specimens were treated before receipt of the culture report. Treatment with thiamphenicol capsules 0·5 g × 5 (total 2·5 g) orally was given under supervision, and patients were asked to abstain from sexual intercourse during follow up. The first re-examination was three to four days after treatment, when side effects (if any) and symptoms and signs were recorded, and microscopy, culture for *N gonorrhoeae,* and urine analysis performed. The second and final re-examination was seven to eight days after treatment, when all pretreatment investigations except syphilis serology were repeated.

The results were as follows. Seventy men were studied, who had 79 sites infected by *N gonorrhoeae*. These were: urethra alone 42; rectum alone 17; pharynx alone 3; urethra and rectum 4; urethra and pharynx 1; pharynx and rectum 2; urethra, pharynx and rectum 1. *N gonorrhoeae* was reisolated after treatment from three (6%) of 48 men with urethral infections, from four (17%) of 24 men with rectal infections, and from three (43%) of seven men with pharyngeal infections. The organisms were reisolated on the first follow up examination in six men, and on the second in four men. These 10 men all denied further sexual exposure, so the reisolation of the organisms was probably due to treatment failure rather than reinfection. Eight (11%) of the 70 men treated were infected by penicillinase producing strains of *N gonorrhoeae;* seven of these infections were cured, but gonococci were reisolated in one case.

Eight of 10 isolates of *N gonorrhoeae* from patients who had failed to respond to thiamphenicol were available for the measurement of their antibiotic sensitivity. Of these, six were inhibited by ⩽2 mg/l thiamphenicol, and all eight strains by ⩽4 mg/l; the range was 0·25-4·0 mg/l, and no strain was completely resistant.

A total of 45 men cured of gonococcal urethritis was available for assessment seven days after treatment, 11 (24%) of whom showed postgonococcal urethritis (defined as the presence of ⩾10 polymorphonuclear leucocytes per field at × 900 magnification in a Gram stained urethral smear, or at × 400 magnification in a wet mount of first catch urine). Of the 45 men, four (9%) had yielded *C trachomatis* before treatment, and this organism was reisolated in every case.

No haematological abnormalities were noted in any of the 70 men after treatment with thiamphenicol. Minor gastrointestinal side effects, usually diarrhoea on the day after treatment, were recorded in 18 (26%) of the patients treated. We conclude that in the dosage used thiamphenicol gave adequate results in the treatment of urethral infections with *N gonorrhoeae,* but in the relatively small number of patients treated for rectal and pharyngeal infections the results were unsatisfactory. In single dosage the drug appears to have no effect against *C trachomatis*. There was no evidence of toxicity or of major side effects.

Yours faithfully,
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TO THE EDITOR, *British Journal of Venereal Diseases*

Comparison of procaine penicillin, mezlocillin, and doxycycline in treatment of uncomplicated gonorrhoea

Sir,

The treatment of uncomplicated gonorrhoea in sexually transmitted disease (STD) clinics in Northern Ireland has for some years been a single intramuscular injection of procaine penicillin in a dose of 2·4 MU unaccompanied by probenecid. We have recently completed a trial of this regimen compared with mezlocillin 1 g given as a single intramuscular injection and doxycycline 300 mg single daily dose orally for three consecutive days.

The study population was made up of men and women attending the genitourinary medicine clinic of the Royal Victoria Hospital, Belfast, who were diagnosed as having uncomplicated gonococcal infection. Diagnosis of gonorrhoea was made on the finding of Gram negative intracellular diplococci in specimens taken from urethra and rectum in men and from the urethra, cervix, and rectum in women. All diagnoses were confirmed by culture. Sugar fermentation reactions and screening for β-lactamase production followed standard methods.[1 2] Minimum inhibitory concentration (MIC) determinations were carried out on New York City medium using double dilutions of the antibiotic under test. After gonorrhoea had been diagnosed patients were randomly assigned to one of the three treatment regimens. They were reviewed two days and one week after completion of treatment.

A total of 295 cases was studied, of which 42 (14·2%) did not return for follow up. Of the 250 patients who attended for follow up, 76 were women and 174 men. The penicillin treatment group comprised 79 patients, who were all microscopically and culture negative at follow up. Mezlocillin treatment was used in 81 patients, of whom three were culture positive on first follow up and three were positive on second review. All those positive on second review had had sexual intercourse with an untreated (probably primary) contact between first and second review. All three of these female contacts subsequently proved to have gonorrhoea. We assume therefore the true failure rate was three of 81 (3·7%.). The doxycycline treatment group comprised 90 patients, six of whom were culture positive at first review and denied further sexual intercourse. One further patient relapsed at second review and he admitted to having had sexual intercourse with a prostitute who subsequently proved to have gonorrhoea. This gave a true failure rate of 7·4%. Neumann *et al*[3] reported a 2·2% failure rate with the same regimen.

Table I shows treatment results broken down by sex and number of reviews attended. Isolates from four patients were β-lactamase producing. Two of these patients had received doxycycline and were culture negative on three follow up visits.

TABLE I *Treatment of gonorrhoea in men and women with three alternative regimens*

Treatment regimen	No of patients attending: 2 or more reviews: Men	2 or more reviews: Women	1 review only: Men	1 review only: Women	No of treatment failures: Men	No of treatment failures: Women
Procaine penicillin 2·4 MU intramuscularly	43	20	10	6	0	0
Mezlocillin 1 MU intramuscularly	39	22	17	3	6*	0
Doxycycline by mouth 300 mg/day for 3 days	48	20	17	5	6	1

*3 probably reinfected.

One had received mezlocillin and was also culture negative on three occasions. One had received procaine penicillin and had not appeared for follow up.

The MICs for 114 of the isolates were recorded and these are summarised in Table II. These results are broadly in keeping with other workers' findings in Europe in the last five years.[4-6] The sensitivities of mezlocillin seem to justify the statement of Khan that this may prove to be a useful drug in the treatment of uncomplicated gonorrhoea relatively resistant to penicillin.[6]

As a result of these findings we shall continue to use our present treatment regime of procaine penicillin, as it has been shown to be both effective and cheap.

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TABLE II *Minimum inhibitory concentrations (MICs) for 114 isolates of Neisseria gonorrhoea*

Antibiotic	Percentage of strains inhibited by concentrations (μg/ml) of: 0·007	0·015	0·06	0·12	0·25	0·5	1·0	2·0	4·0	5·0	10·0	20·0
Penicillin*			79	14	3	1	3					
Mezlocillin	57	75	90	4	6							
Doxycycline			22	16	13	27	14	2			4	

*30% of isolates had MICs of 0·015 μg/ml and at least 50% had MICs of 0·03 μg/ml. Not all isolates were tested at these lower concentrations, however, and percentages results at these concentrations are therefore not included in the table.

TO THE EDITOR, *British Journal of Venereal Diseases*

Cervical cytology figures for 1970-81

Sir,

We have recently completed a retrospective examination of all results of cervical smears from 1970-81 and related data including: age at time of smear test, current oral contraceptive practice, and past history of sexually transmitted disease. As colposcopy was only available to us in later years, we did not analyse the colposcopic follow up of the patients.

Our policy was to screen only women who had not had a smear elsewhere in the preceding year, and the test was carried out

TABLE I *Results of cervical smears taken in family planning clinics and the STD clinic 1970-81*

Year	Family planning clinic: No tested	Family planning clinic: No (%) dysplastic	Sexually transmitted disease clinic: No tested	Sexually transmitted disease clinic: No (%) dysplastic
1970	2846	5 (0·17)	204	6 (2·9)
1971	2192	4 (0·18)	140	4 (2·8)
1972	3619	12 (0·33)	118	3 (2·5)
1973	4642	10 (0·21)	217	10 (4·6)
1974	3840	7 (0·18)	189	5 (2·6)
1975	3579	9 (0·25)	217	10 (4·6)
1976	4560	17 (0·37)	233	21 (9·0)
1977	3241	14 (0·43)	196	21 (10·7)
1978	4552	37 (0·81)	235	21 (9·0)
1979	5552	47 (0·85)	256	19 (7·4)
1980	8979	68 (0·76)	386	45 (11·6)
1981	8116	97 (1·2)	436	56 (12·9)